Special Issue

Characterization and Mechanics of Fiber-Reinforced Polymer Matrix Composites

Message from the Guest Editor

Polymer matrix composite materials have been introduced in several industries, due to their excellent weight-specific mechanical properties. In recent years, more and more sophisticated models have been developed attempting to describe the behavior of polymer matrix composites under quasi-static, thermal, cyclic, or high-rate loading. The availability of these simulation models provides a foundation for predictive simulation of composite materials. Over the years, several test methods have been standardized for unidirectional composites subjected to quasi-static loading. However, if the architecture of the composite changes or if the loading conditions vary there are nearly no standardized test methods. This Special Issue, therefore, seeks original papers on advanced test methods for polymer matrix composite materials. In particular, new ideas on measuring strain-rate dependent material properties, hygro-thermal effects, fatigue loading, multi-axial loading, and fracture mechanical methods are solicited. It is my pleasure to invite you to submit a manuscript to this Special Issue. Full papers, communications, and reviews are all welcome.

Guest Editor

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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